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OFFICIAL

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Jim Otter
Serial No.: 09/738,591
Filed: December 15, 2000
Group Art Unit: 1762
Examiner: Parker, Frederick John
Title: A METHOD MAKING A FILM WITH IMPROVED
WETTABILITY PROPERTIES

REPLY BRIEF

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in reply to the Examiner's Answer mailed January 12, 2003. The Examiner's Answer raises three arguments, which require some brief responses.

ARGUMENTS RELATING TO THE ORDER OF THE STEPS OF THE METHOD

First, beginning on page 8, the Examiner argues that the order of the steps of the method are not important.

Answer:

Applicant is claiming a method including the steps of applying polar particulates to a film, then adhering the polar particulates to the film, and then adding the film to a heat transfer component. The Examiner states in the Examiner's Answer that the mechanism of enhanced flow is due to the presence of the particulates on the film, not the order of applying the particulates. However, claims 1-5, 7, 20-23, 25, 26 and 28 recite a method of making the film, not the film itself. Kaneko does not teach, suggest or disclose applying polar particulates to a film before adding the film to a heat exchanger as in the claimed invention.

The Examiner refers to example 8 and column 3, lines 2-22 of Kaneko and states that Kaneko teaches the step of applying a thermoplastic resin layer to a metal surface before the silica particles are added to the film. However, the Kaneko reference, including the examples

60246-116

cited by the Examiner, discloses a resin or corrosion resistant film applied to the metal surface as a solution, which dries to form the film. The resin layer is applied to the metal surface as a solution. The solution must first be applied to the metal surface to form the film before any silica particles can be added. It would therefore be impossible to add the silica particles to the film before the application of the film to the metal surface because the film is added as a solution in Kaneko. Therefore, the combination of Bentley and Kaneko does not teach the claimed invention.

ARGUMENTS RELATING TO COATING THE SILICA PARTICLES

On page 9, the Examiner argues that an adhesive can be used to adhere the silica particles of Kaneko into a film.

Answer:

The silica particles of Kaneko are applied to the film as a solution. Moisture is removed from the film to adhere the silica particles to the film. Because the silica particles are added to the film as a solution, there is no reason to employ an adhesive substance as it would provide no benefit. One of ordinary skill in the art would not even consider using an adhesive to adhere a solution to a solid surface because the silica particles are added as a solution.

ARGUMENTS RELATING TO COATING THE SILICA PARTICLES

On page 10, the Examiner argues that the silica particles of Kaneka can be coated.

Answer:

The silica particles of Kaneko are applied to a film as a solution. Kaneko discloses that the silica particles have surface silanol groups ($-\text{SiOH}$) that dissociate in water to have a negative charge. After drying, the silica particles adhere to the film. The silanol groups that do not participate in particle adhesion function to provide a hydrophilic surface. If the silica particles of Kaneko were coated, the silanol groups would be covered by the coating and would therefore be unable to function as disclosed, ruining this feature of Kaneko.

60246-116

CLOSING

For the reasons set forth above, and for the reasons set forth in the main brief, the rejection must be reversed.

Respectfully Submitted,

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Dated: February 17, 2004

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, 703-872-9306 on February 17, 2004.


Amy M. Spaulding

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